

CLAIMS

1. An oil system for an internal combustion engine, the system comprising:

an oil pump driven by the engine and supplying pressurized oil through a main oil feed to a main bearing gallery, a cam gallery, and a hydraulically actuated device; and

a pressure regulator connected between the main oil feed and the main bearing and cam galleries and operative to selectively restrict oil flow to the galleries and thereby raise oil pressure supplied to the hydraulically actuated device to a desired operating level greater than the oil pressure

10 supplied to the galleries.

2. A system as in claim 1 wherein the hydraulically actuated device is a cam phaser.

3. A system as in claim 1 wherein the hydraulically actuated device is a series of switching lifters.

4. A system as in claim 1 wherein the hydraulically actuated device is a stepping valve train.

5. A system as in claim 2 wherein the pressure regulator valve includes an open orifice restricting oil flow to the galleries to maintain a desired minimum oil pressure to the cam phaser at lower engine speeds and a bypass valve opening at higher engine speeds to reduce the flow restriction
5 and thereby control the increase in oil pressure supplied for cam phaser operation.

6. A system as in claim 1 wherein the cam gallery receives oil from the main bearing gallery.
7. A system as in claim 1 including an oil pickup connected with an inlet of the pump to draw in oil from an engine oil pan.
8. A system as in claim 1 including an oil filter connected between the oil pump and the main oil feed
9. An oil system for an internal combustion engine comprising:
 - an oil pump having an inlet connected to draw oil from an oil pickup, and an outlet connected to a main engine oil feed;
 - the main oil feed distributing the oil to a cam phaser and to a main bearing gallery connected with a cam gallery through a cam gallery feed; and
 - a pressure regulator positioned to controllably restrict oil flow in the main bearing gallery and thereby provide a lower oil pressure to the main bearing gallery and a relatively higher oil pressure to actuate the cam phaser.